

**Claims**

1. Spraying head for the humidification of intake air, especially the intake air of a piston engine, said spraying head comprising a body and a channel for supplying a spraying medium from an inlet to at least one nozzle, characterized in that the spraying head (6) is provided with at least two channels (18, 18', 18''), each forming a separate passage to at least one nozzle (9, 10, 11).
2. Spraying head according to claim 1, characterized in that at least some of the nozzles (9, 10, 11) of the spraying head are different from each other.
3. Spraying head according to claim 1 or 2, characterized in that a shutting/regulating mechanism is provided in connection with the spraying head (6) to allow the supply of medium to the channels (18, 18', 18'') leading to different nozzles to be shut off/regulated.
4. Spraying head according to any one of claims 1 - 3, characterized in that the nozzles (9, 10, 11) have been adapted for spraying a liquid mist.
5. Spraying head according to any one of claims 1 - 4, characterized in that the spraying head has been adapted for spraying a high-pressure liquid mist.
6. Spraying head according to any one of claims 1 - 5, characterized in that the nozzles (9, 10, 11) are arranged in groups, and that at least one channel (18, 18', 18'') leads to each one of said groups.
7. Spraying head according to any one of claims 1 - 6, characterized in that the spraying head comprises at least one nozzle (9) arranged to spray in a direction substantially against the direction of flow of the intake air.

8. Spraying head according to any one of claims 1 – 7, characterized in that at least some of the nozzles (9, 10, 11) are arranged to spray in a direction substantially in the same direction.
- 5 9. Spraying head according to any one of claims 1 – 7, characterized in that the spraying head comprises at least one nozzle (10, 11) arranged to spray substantially in the direction of flow of the intake air.
- 10 10. Use of a spraying head according to claim 1 in the humidification of the intake air of a piston engine.